For the US, this document supports:

Avoiding interfering with Terminal Doppler Weather Radar (TDWR) (used near major airports) when using the 5.4-GHz band, especially within 35 km (21.75 mi) of the TDWR

4.1 US - OPERATION TO AVOID INTERFERENCE WITH TDWR

The US FCC, NTIA, FAA, and industry are working to resolve interference to Terminal Doppler Weather Radar (TDWR) systems used near airports that has occurred from some outdoor wireless systems operating in the 5470 MHz – 5725 MHz band. These wireless devices are subject to Section 15.407. When operating as a master device they are required to implement radar detection and DFS functions and radios must not transmit on channels which overlap the 5600-5650 MHz band used by TDWR.

Additional information is available from

- the FCC's Knowledge Database (KDB) Publication 443999 "Interim Plans to Approve UNII Devices Operating in the 5470-5725 MHz Band with Radar Detection and DFS Capabilities" available at https://fjallfoss.fcc.gov/kdb/GetAttachment.html?id=33781
- the Wireless Internet Service Providers Association (WISPA) in coordination with Spectrum Bridge: http://www.spectrumbridge.com/udia/home.aspx. 5.4-GHz radios must be professionally installed. The professional installer must have the following expertise:
- Understanding of the configurations outlined in Table 11: US FCC IDs and Industry Canada Certification Numbers and covered configurations, especially those applicable to the 5470-5725 MHz U-NII band.
- Understanding of the master/slave operation of the device.
- Understanding of the devices frequency scan selection settings and how they can be set to prevent scanning and therefore transmission on any specific frequencies.
- Understanding of the option to set primary and two alternate frequencies on the device.
- Ability to use the GUI to set the primary and alternate transmit frequencies on the device, scanned frequencies on an device, and Transmit Output Power of a radio.
- Ability to use the spectrum analyzer feature of the radio to observe the local RF environment.
- Ability to determine if a radio is within 35 km (21.75 mi) of any Terminal Doppler Weather Radar (TDWR) using the Search function available at http://www.spectrumbridge.com/udia/search.aspx, or using various mapping programs and the data from in Table 2: TDWR Location Information.
- Ability to set the device's transmit frequency (frequencies, if using alternate frequencies) and device's scanned frequencies at least 30 MHz (center-to-center) from any TDWR operating frequency or frequencies within 35 km of the radio.

To gain this expertise the following training is required:

- Study of the documentation
- Familiarization in a lab or test environment
- Hands-on training with an experienced installer.

Procedure 1 provides the specific instructions to avoid interfering with TDWR when using 5.4GHz devices

Procedure 1: Avoiding interference with Terminal Doppler Weather Radar (TDWR)

1. Use standard installation procedures with the additional steps outlined below.

2. For each 5.4-GHz device, determine if it is within 35 km (21.75 mi) of any Terminal Doppler Weather Radar (TDWR). This can be done using the map search tool at http://www.spectrumbridge.com/udia/search.aspx, or other mapping tools using the data from Table 2.

4. If an device is within 35 km (21.75 mi) of any TDWR, set the primary transmit frequency (and alternate frequencies, if used) to a frequency (or frequencies) at least 30 MHz (center-to-center) from the TDWR operation frequency shown on http://www.spectrumbridge.com/udia/search.aspx or in Table 2.

5. If a deviceis within 35 km (21.75) mi of any TDWR

- Ensure its device is using primary and alternate (if used) transmit frequencies that are at least 30 MHz from the TDWR operation frequency

- Set the devices scanned frequencies to not include frequencies within 30 MHz of the TDWR operation frequency.

Note, even if the primary device itself is more than 35 km from the TDWR, if any of its clients are within 35 km, it must operate at least 30 MHz from the TDWR operation frequency.

Note, in some instances a device may be within 35 km of multiple TDWRs. In this case, the device must use a frequency at least 30 MHz from all local TDWR operation frequencies.

6. Register each 5.4-GHz device operating within 35 km (21.75 mi) of any TDWR in the voluntary WISPA-sponsored database at http://www.spectrumbridge.com/udia/home.aspx.

Note, this database may help expedite resolution of any interference to TDWRs.

7. Registration includes, at a minimum, Latitude, Longitude, and External Antenna Model. When registering a device, choose whether to allow General Access or to have the device information viewable only by you and government representatives.

Table 2: TDWR Location Information

State	City	Longitude	Latitude	Frequency	Terrain Elevation (MSL) (ft)	Antenna Height above Terrain (ft)
AZ	PHOENIX	W 112 09 46	N 33 25 14	5610 MHz	1024	64
CO	DENVER	W 104 31 35	N 39 43 39	5615 MHz	5643	64
FL	FT LAUDERDALE	W 080 20 39	N 26 08 36	5645 MHz	7	113
FL	MIAMI	W 080 29 28	N 25 45 27	5605 MHz	10	113
FL	ORLANDO	W 081 19 33	N 28 20 37	5640 MHz	72	97
FL	TAMPA	W 082 31 04	N 27 51 35	5620 MHz	14	80
FL	WEST PALM BEACH	W 080 16 23	N 26 41 17	5615 MHz	20	113
GA	ATLANTA	W 084 15 44	N 33 38 48	5615 MHz	962	113
IL	MCCOOK	W 087 51 31	N 41 47 50	5615 MHz	646	97
IL	CRESTWOOD	W 087 43 47	N 41 39 05	5645 MHz	663	113
IN	INDIANAPOLIS	W 086 26 08	N 39 38 14	5605 MHz	751	97
KS	WICHITA	W 097 26 13	N 37 30 26	5603 MHz	1270	80
KY	COVINGTON CINCINNATI	W 084 34 48	N 38 53 53	5610 MHz	942	97
KY	LOUISVILLE	W 085 36 38	N 38 02 45	5646 MHz	617	113
LA	NEW ORLEANS	W 090 24 11	N 30 01 18	5645 MHz	2	97
MA	BOSTON	W 070 56 01	N 42 09 30	5610 MHz	151	113
MD	BRANDYWINE	W 076 50 42	N 38 41 43	5635 MHz	233	113
MD	BENFIELD	W 076 37 48	N 39 05 23	5645 MHz	184	113
MD	CLINTON	W 076 57 43	N 38 45 32	5615 MHz	249	97
MI	DETROIT	W 083 30 54	N 42 06 40	5615 MHz	656	113
MN	MINNEAPOLIS	W 092 55 58	N 44 52 17	5610 MHz	1040	80
MO	KANSAS CITY	W 094 44 31	N 39 29 55	5605 MHz	1040	64
MO	SAINT LOUIS	W 090 29 21	N 38 48 20	5610 MHz	551	97
MS	DESOTO COUNTY	W 089 59 33	N 34 53 45	5610 MHz	371	113
NC	CHARLOTTE	W 080 53 06	N 35 20 14	5608 MHz	757	113
NC	RALEIGH DURHAM	W 078 41 50	N 36 00 07	5647 MHz	400	113
NJ	WOODBRIDGE	W 074 16 13	N 40 35 37	5620 MHz	19	113
NJ	PENNSAUKEN	W 075 04 12	N 39 56 57	5610 MHz	39	113
NV	LAS VEGAS	W 115 00 26	N 36 08 37	5645 MHz	1995	64
NY	FLOYD BENNETT FIELD	W 073 52 49	N 40 35 20	5647 MHz	8	97
OH	DAYTON	W 084 07 23	N 40 01 19	5640 MHz	922	97
OH	CLEVELAND	W 082 00 28	N 41 17 23	5645 MHz	817	113
OH	COLUMBUS	W 082 42 55	N 40 00 20	5605 MHz	1037	113
OK	AERO. CTR TDWR #1	W 097 37 31	N 35 24 19	5610 MHz	1285	80
OK	AERO. CTR TDWR #2	W 097 37 43	N 35 23 34	5620 MHz	1293	97
OK	TULSA	W 095 49 34	N 36 04 14	5605 MHz	712	113
OK	OKLAHOMA CITY	W 097 30 36	N 35 16 34	5603 MHz	1195	64
PA	HANOVER	W 080 29 10	N 40 30 05	5615 MHz	1266	113
PR	SAN JUAN	W 066 10 46	N 18 28 26	5610 MHz	59	113
TN	NASHVILLE	W 086 39 42	N 35 58 47	5605 MHz	722	97
TX	HOUSTON INTERCONTL	W 095 34 01	N 30 03 54	5605 MHz	154	97
TX	PEARLAND	W 095 14 30	N 29 30 59	5645 MHz	36	80
TX	DALLAS LOVE FIELD	W 096 58 06	N 32 55 33	5608 MHz	541	80
TX	LEWISVILLE DFW	W 096 55 05	N 33 03 53	5640 MHz	554	31
UT	SALT LAKE CITY	W 111 55 47	N 40 58 02	5610 MHz	4219	80
VA	LEESBURG	W 077 31 46	N 39 05 02	5605 MHz	361	113
WI	MILWAUKEE	W 088 02 47	N 42 49 10	5603 MHz	820	113
Latitude and Longitude are specified in NAD 83 Last updated July 30, 2010						